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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,611	04/05/2006	David W. Bacon	DBI-2	4213
39703	7590	05/27/2010		
C. JAMES BUSHMAN 5851 San Felipe SUITE 975 HOUSTON, TX 77057			EXAMINER BASICHAS, ALFRED	
			ART UNIT 3743	PAPER NUMBER
			MAIL DATE 05/27/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,611

Applicant(s)

BACON, DAVID W.

Examiner

Alfred Basichas

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 5,9-16,17/16,18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,17/1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Wellington (5,862,858), which shows all of the claimed limitations. For example:

1. An apparatus for igniting a combustible medium in a tubular member in an earth borehole 3 in a subterranean formation comprising: an igniter assembly, said igniter assembly comprising: a support 10; a catalytic material 19,20 carried by said support, said catalytic material comprising a substance which reacts with a hydrogen-containing gas in the presence of an oxidizing gas to produce an exothermic reaction and a temperature sufficient to cause auto ignition of said hydrogen-containing gas (see at least col. 5, lines 36-62) to produce a flame; a source of said hydrogen-containing gas (not shown, but inherent); and a source of said oxidizing gas (not shown, but inherent); and a tubular member 10,22 disposable in said borehole, said igniter assembly being positioned in said tubular member.

2. The apparatus of claim 1, wherein said igniter assembly comprises an elongate tubular housing having a first end and a second end, said catalytic material being disposed in said tubular housing, said hydrogen-containing gas and said oxidizing gas being introduced into said first end of said housing, said

hydrogen-containing gas being introduced under pressure into said tubular housing (see at least fig. 1).

3. The apparatus of claim 2, wherein said catalytic material is in the form of a tube disposed in said tubular housing (see at least fig. 1).

6. The apparatus of claim 1, wherein said source of air comprises ambient air (inherent that the air would be at some point accumulated from the ambient).

7. The apparatus of claim 1, wherein said source of air comprises forced air (inherent that the air would have to be forced to travel down the hole at the necessary pressure).

8. The apparatus of claim 1, wherein there are a plurality of igniter assemblies positioned in said tubular member and staggered there along (see at least fig. 1), each of said igniter assemblies being associated with a burner (catalytic).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wellington (5,862,858) in view of Sweeney (6,446,426). Wellington discloses substantially all of the claimed limitations including a platinum group metal utilized in the catalytic material. Nevertheless, Wellington fails to specifically recite the metallic foam. Sweeney teaches a heat source utilizing a catalytic material including platinum carried by a metallic foam structure (see at least col. 6, lines 22-33). Sweeney teaches that such an arrangement provides for minimizing heat sink losses to the catalytic member (see at least col. 6, lines 10-21). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the claimed metallic foam as taught by Sweeney into the invention disclosed by Wellington, so as to provide for minimizing heat sink losses to the catalytic member.

6. Claim 17/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wellington (5,862,858), which discloses substantially all of the claimed limitations including the hydrogen containing gas exhibiting an inherent pressure. Nevertheless, Wellington fails to specifically recite the claimed pressure range. While Wellington is silent on the specific measurements, it has been held that "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742, 82 USPQ2d 1385,

1396 (2007). As for the specific range, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the claimed range into the invention disclosed by Wellington since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable values or ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Swain*, 156 F.2d 239. See also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.").

Response to Arguments

7. Applicants' arguments with regard to the rejected claims have been considered, but are not deemed fully persuasive.

a. Applicant asserts that Wellington fails to anticipate claim 1, as amended, because it now requires the production of a flame. However, it should be noted that the claim, given its broadest reasonable interpretation, only requires that the temperature be "sufficient" to cause auto ignition and production of a flame. In the specification of the instant application, applicant states that the temperature "sufficient" to cause auto ignition and production of a flame is at least 1080 degrees Fahrenheit (see at least page 9, lines 3-8). Wellington specifically recites temperatures sufficient to cause auto ignition (see at least col. 7, Table), which are "sufficient" for production of a flame.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Basichas whose telephone number is 571 272 4871. The examiner can normally be reached on Monday through Friday during regular business hours.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center telephone number is 571 272 3700.
May 27, 2010

/Alfred Basichas/
Primary Examiner, Art Unit 3743